9-26-06

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of: **TIMOTHY E. JEDLICKA**

Application No.: **10/627,220**   Examiner: **Quoc Duc tran**

Filed: **July 25, 2003**   Docket No.: **LUTZ 2 00219**

For: METHOD AND SYSTEM FOR DETECTING AN ATYPICAL OCCURRENCE
          WITHIN A TELECOMMUNICATIONS NETWORK

MAIL STOP APPEAL BRIEF – PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Dear Sir:

Applicant transmits herewith one (1) originally signed copy of the APPEAL BRIEF
UNDER 37 C.F.R. § 41.37 for the above-identified patent application.

Applicant hereby petitions the Commissioner under 37 C.F.R. § 1.136(a) and
requests a two month extension of time to file the Appeal Brief.

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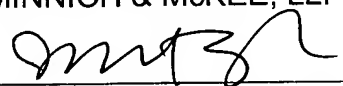
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Respectfully submitted,

FAY, SHARPE, FAGAN, MINNICH & McKEE, LLP

9/25/06

Date

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PATENT APPLICATION

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For: METHOD AND SYSTEM FOR DETECTING AN ATYPICAL OCCURRENCE
       WITHIN A TELECOMMUNICATIONS NETWORK

<u>BRIEF ON APPEAL</u>

Appeal from Group 2643

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I.   REAL PARTY IN INTEREST

The real party in interest for this appeal and the present application is Lucent Technologies, Inc., by way of an Assignment recorded in the U.S. Patent and Trademark Office at Reel 014334, Frame 0341, 3 pages.

II.   STATEMENT OF RELATED APPEALS AND INTERFERENCES

There are no prior or pending appeals, interferences or judicial proceedings, known to Appellant, Appellant's representative, or the Assignee, that may be related to, or which will directly affect or be directly affected by or have a bearing upon the Board's decision in the pending appeal.

III.   STATUS OF CLAIMS

Claims 1-18 are on appeal.

Claims 1-18 are pending.

Claims 1-18 are rejected.

IV.   STATUS OF AMENDMENTS

No Amendment After Final Rejection has been filed.

V.   SUMMARY OF CLAIMED SUBJECT MATTER

The invention of claim 1 is directed to a method for detecting an atypical occurrence within a given region in a telecommunications network. The method comprises assigning a given weight to each of a plurality of destination addresses within said region according to said weighting system (see step 10 in FIG. 1 and paragraph [0013]); collecting call data for said region for a given period of time(see step 20 in FIG. 1 and paragraph [0015]), said call data including calls made to said destination addresses and corresponding call occurrence times (see paragraph [0015]); developing a weighted call traffic pattern based upon said call data (see step 30 in FIG.

1 and paragraph [0015]); and, using said weighted call traffic pattern to detect an atypical occurrence within said region (see step 40 in FIG. 1 and paragraph [0018]).[1]

The invention of claim 10 is directed to a system for detecting an atypical occurrence within a given region in a telecommunications network (100) (see FIG. 2 and paragraphs [0020] to [0027]). The system comprises means (140) for assigning a given weight to each of a plurality of destination addresses within said region according to said weighting system (190); means (140) for collecting call data (180) for said region for a given period of time, said call data including calls made to said destination addresses and corresponding call occurrence times; means (140) for developing a weighted call traffic pattern based upon said call data; and, means (140) for using said weighted call traffic pattern to detect an atypical occurrence within said region.[2]

VI.   GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The following grounds of rejection are presented for review:

1.   Claims 1-8, 10-17 are rejected as having been obvious under 35 U.S.C. §103(a) over O'Reilly et al. (US 5,825,769) in view of Siegel (US 6,766,277).

2.   Claims 9 and 18 are rejected as having been obvious under 35 U.S.C. §103(a) over O'Reilly et al. (US 5,825,769) in view of Siegel (US 6,766,277) and further in view of Nolting (US 6,282,267).

A.   Claims 1-9 Would Not Have Been Obvious Over O'Reilly In View of Siegel

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[1] Applicant recognizes that there may be an issue with respect to an antecedent basis in claim 1.

[2] Applicant recognizes that there may be an issue with respect to an antecedent basis in claim 10.

The present application is directed to an effective surveillance method for providing an early warning of unusual outbreaks of disease or other public health crises, whether natural or intentional, using call data for a telecommunications network.

More particularly, claim 1 comprises a method of detecting an atypical occurrence within a given region in a telecommunications network. This claim includes assigning a given weight to each of a plurality of destination addresses within the region according to a weighting system (see paragraphs [0013] and [0014] and Table 1).

The primary reference, O'Reilly, relates to special service telephone call processing (*i.e.*, 800, 900 and VNET calls) in a telecommunications network. In this regard, O'Reilly discloses a system and method for viewing the traffic of the calls to provide customers or subscribers with special service call disposition statistics and call detail information. As noted in O'Reilly (col. 3, lines 12-25):

> The present invention provides traffic statistics data as specialized reports and/or data files to subscribers who subscribe to the special service call processing service provided by the network; provides a subscriber the ability to download call statistics from the database of the TVS system so that he can format and design his own reports; provides a subscriber the ability to instruct the system to provide reports on a particular given time through a particular method; provides reports to subscribers that contain greater call details of their subscribed special service calls than other previous systems and methods; and provides real time enhanced call detail records to subscribers so that a subscriber can monitor in real time the operation of the network, so as to be able to effect the necessary changes expeditiously.

While O'Reilly does all this, it still fails to teach, among other things, assigning a given weight to a destination address according to a weighting system. In reviewing O'Reilly, particularly the cited portion (col. 8, lines 60-67 to col. 9, lines 1-60), it is apparent that quite a lot of data is compiled for calls to a customer's 800/900 number (*i.e.*, destination number). For example, call completion ratios, NPA counts, MTS counts, and terminating call dispositions may be provided. All of these statistics relate to a customer's 800/900 number so that that customer may ultimately be able to determine the effectiveness of the number. Thus, there is no need to *weight* a particular 800/900 number, since the customer would not care what is happening to the 800/900 numbers of other telephone customers. Not surprisingly, there is no mention in O'Reilly of the concept of weighting telephone numbers. As such, this feature is not taught or suggested by O'Reilly in any way.

On page 5 of the Final Office Action, the Examiner argues that it is "well understood and defined that 'weight' as used in statistics is 'a factor assigned to a number in a computation, *as in determining an average*, to make the number's effect on the computation reflect its importance.'" (Emphasis added.) The comment "as in determining an average" is where the Examiner goes astray. The Examiner is confusing a *weighted average* with a *simple average*. Simply because both terms have the word "average" in them does not make them the same. "Weighting" can also be used as Applicant is using it - with no regard to computing an average. Furthermore, O'Reilly never really uses an "average." The patent does disclose the use of a ratio (see Col 9, 11-15), but a ratio is also different than an average (not that it should matter since an average cannot be extended to mean a weighted average).

No where does O'Reilly use the factoring of peg counts (call traffic). Nor for that matter does Siegel. If, for example, O'Reilly weighted a peg count (*e.g.*, "Network Blocked" (column 9, line 5)) as "effecting the computation to reflect its importance," then perhaps the Examiner could argue that O'Reilly is implying a weighted average. However, without any "factoring" (accepted to mean multiplication) of the peg counts, O'Reilly is simply not using weighting. So, since O'Reilly (and Siegel) omits any mention of averaging, weighted averages, factoring, or weighting, it cannot be claimed that they teach such technique.

Claim 1 also includes developing a weighted call traffic pattern. Again, this feature is not taught or suggested by the cited references. For instance, since O'Reilly does not weight destination addresses, it does not develop a weighted call traffic pattern based upon call data, as provided in claim 1.

Further, as acknowledged by the Examiner on page 2 of the Final Office Action, O'Reilly fails to teach using the weighted call traffic pattern to detect an atypical occurrence within the region. However, the Examiner alleges that Siegel teaches the claimed using feature and that it would have been obvious to combine the teachings of Siegel with O'Reilly. Without conceding the obviousness of the combination, applicant notes that the combination still fails to teach all the features of the claim.

In particular, applicant respectfully disagrees that Siegel discloses the claimed features, including using the weighted call traffic pattern to detect an atypical occurrence. Siegel is directed to a computerized early warning network for biological

defense or terrorism that produces an alert and calls the health authorities to action. Data is generated in the point of sale units of a retail store or pharmacy that sells prescription and nonprescription medicines. The database of purchases is periodically called to extract information regarding the quantities of different types of medicines purchased in a given period and that information is transmitted to the servers of the public health authorities. Thus, with medicine type correlated to specific diseases, the computers of the health authorities evaluate the purchase information on a type by type basis and region basis to determine occurrence of biological event in any of the regions. Siegel, however, fails to assign weights to various telephone numbers, much less use weighted call patterns to determine an atypical occurrence. Siegel is limited to extracting sales information from point of sales systems and similar information systems in retail businesses on purchases of medicine and analyzing the acquired information. Siegel does not disclose monitoring the number of telephone calls to specific locations, including non-medical related locations such as schools, day cares, and work places. As such, Siegel does not teach or suggest assigning given weight to destination addresses, developing a way to call traffic pattern based upon call data, or using the weighted call traffic pattern to detect an atypical occurrence within a region, as set forth in claim 1. Thus, Siegel fails to make-up for the short comings in O'Reilly's teachings.

Notwithstanding the foregoing, the Examiner simply asserts that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Siegel into the teachings of O'Reilly for the purpose . . . of providing an early warning network that operates against a broad class of public health threats, such as bio-terrorism, accidental biological events, and/or naturally occurring diseases." (See page 3 of the Final Office Action.) The Examiner, however, has provided no reference, or other evidence to support his conclusion that it would be obvious to one skilled in the art to modify the statistical reporting method of O'Reilly with the early warning network of Siegel, aside from a conclusory statement. Applicant asserts that the Examiner has impermissibly concluded that claim is obvious in view of a combination of O'Reilly and Siegel without any legitimate support on the record. The Examiner has failed to provide a reference or other suitable evidence showing that one skilled in the art would be motivated to modify the teachings of O'Reilly with the teachings of Siegel In accordance with the obligations imposed under MPEP § 2144.03.

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A *prima facie* case of obviousness is not established absent proper motivation. Simply because the early warning network of Siegel *could* be used in other systems, a motivation to modify O'Reilly to meet the limitations of claim 1 is not formed. Moreover, according to MPEP § 2144.01, the "fact that the claimed invention is within the capabilities of one of ordinary skill in the art is not sufficient by itself to establish *prima facie* obviousness." Merely because the claimed elements are individually found in the prior art, it does not necessarily follow that it would be obvious to combine the elements from different prior art references. *See MPEP § 2141.01, citing Ex parte Levengood*, 28 USPQ 2d 1300 (Bd. Pat. App. & Inter. 1993).

Consequently, absent a motivation to combine and modify O'Reilly with the teachings of Siegel, it is irrelevant that the elements and/or limitations *may* be individually or separately known in the prior art. Clearly, the Examiner is motivated to combine these teachings for no other reason than to arrive at the claimed invention. This is a classic example of impermissible hindsight.

Neither O'Reilly nor Siegel, either individually or in combination, expressly teach or fairly suggest the claimed features. Therefore, a *prima facie* case of obviousness has not been established since the alleged combination does not expressly disclose or fairly suggest all the claimed features. The rejection of independent claim 1 (and its corresponding dependent claims 2-9) should therefore be withdrawn.

B.   Claims 10-17 Would Not Have Been Obvious Over O'Reilly in View of Siegel

Claim 10 is similar to claim 1 and comprises a system for detecting an atypical occurrence within a given region in a telecommunications network. Claim 10 includes means for assigning a given weight to each of a plurality of destination addresses within the region according to a weighting system.

The primary reference, O'Reilly, relates to special service telephone call processing (*i.e.*, 800, 900 and VNET calls) in a telecommunications network. O'Reilly discloses a system and method for viewing the traffic of the calls to provide customers or subscribers with special service call disposition statistics and call detail information. As noted in O'Reilly (col. 3, lines 12-25):

> The present invention provides traffic statistics data as specialized reports and/or data files to subscribers who subscribe to the special service call processing service provided by the network; provides a subscriber the

ability to download call statistics from the database of the TVS system so that he can format and design his own reports; provides a subscriber the ability to instruct the system to provide reports on a particular given time through a particular method; provides reports to subscribers that contain greater call details of their subscribed special service calls than other previous systems and methods; and provides real time enhanced call detail records to subscribers so that a subscriber can monitor in real time the operation of the network, so as to be able to effect the necessary changes expeditiously.

While O'Reilly does all this, it fails to teach, among other things, means for assigning a given weight to a destination address according to a weighting system. In reviewing O'Reilly, particularly the cited portion (col. 8, lines 60-67 to col. 9, lines 1-60), it is apparent that quite a lot of data is compiled for calls to a customer's 800/900 number (*i.e.*, destination number). For example, call completion ratios, NPA counts, MTS counts, and terminating call dispositions may be provided. All of these statistics relate to a customer's 800/900 number so that that customer may ultimately be able to determine the effectiveness of the number. Thus, there is no need to *weight* a particular 800/900 number, since the customer would not care what is happening to the 800/900 numbers of other telephone customers. Not surprisingly, there is no mention in O'Reilly of the concept of weighting telephone numbers.

On page 5, the Examiner argues that it is "well understood and defined that 'weight' as used in statistics is 'a factor assigned to a number in a computation, *as in determining an average*, to make the number's effect on the computation reflect its importance." (Emphasis added.) The comment *as in determining an average* is where the Examiner goes astray. The Examiner is confusing a *weighted average* with a *simple average*. Simply because both terms have the word "average" in them does not make them the same. "Weighting" can also be used as Applicant is using it - with no regard to computing an average. Furthermore, O'Reilly never uses an "average." The patent does disclose the use of a ratio (see Col 9, 11-15), but a ratio is also different than an average (not that it should matter since an average cannot be extended to mean a weighted average).

No where does O'Reilly use the factoring of peg counts (call traffic). Nor for that matter does Siegel. If O'Reilly weighted a peg count (*e.g.*, "Network Blocked" (column 9, line 5)) as "effecting the computation to reflect its importance," then perhaps the

Examiner could argue that O'Reilly is implying a WEIGHTED AVERAGE. However, without any "factoring" (accepted to mean multiplication) of the peg counts, O'Reilly is simply not using weighting. So, since O'Reilly (and Siegel) omits any mention of averaging, weighted averages, factoring, or weighting, it cannot be claimed that they teach such technique.

Claim 10 also includes means for developing a weighted call traffic pattern. Again, this feature is not taught or suggested by the cited references. For instance, since O'Reilly does not weight destination addresses, it does not include means for developing a weighted call traffic pattern based upon call data, as provided in claim 10.

Further, as acknowledged by the Examiner on page 2 of the Final Office Action, O'Reilly fails to teach means for using the weighted call traffic pattern to detect an atypical occurrence within the region. However, the Examiner alleges that Siegel teaches the claimed feature and that it would have been obvious to combine the teachings of Siegel with O'Reilly. Without conceding the obviousness of the combination, applicant notes that the combination still fails to teach all the features of the claim.

In particular, applicant respectfully disagrees that Siegel discloses the claimed features, including means for using the weighted call traffic pattern to detect an atypical occurrence. Siegel is directed to a computerized early warning network for biological defense or terrorism that produces an alert and calls the health authorities to action. Data is generated in the point of sale units of a retail store or pharmacy that sells prescription and nonprescription medicines. The database of purchases is periodically called to extract information regarding the quantities of different types of medicines purchased in a given period and that information is transmitted to the servers of the public health authorities. Thus, with medicine type correlated to specific diseases, the computers of the health authorities evaluate the purchase information on a type by type basis and region basis to determine occurrence of biological event in any of the regions. Siegel, however, fails to assign weights to various telephone numbers, much less use weighted call patterns to determine an atypical occurrence. Siegel is limited to extracting sales information from point of sales systems and similar information systems in retail businesses on purchases of medicine and analyzing the acquired information. Siegel does not disclose monitoring the number of telephone calls to specific locations,

including non-medical related locations such as schools, day cares, and work places. As such, Siegel does not teach or suggest means for assigning given weight to destination addresses, means for developing a way to call traffic pattern based upon call data, or means for using the weighted call traffic pattern to detect an atypical occurrence within a region, as set forth in claim 10. Thus, Siegel fails to make-up for the short comings in O'Reilly's teachings.

Notwithstanding the foregoing, the Examiner simply asserts that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Siegel into the teachings of O'Reilly for the purpose . . . of providing an early warning network that operates against a broad class of public health threats, such as bio-terrorism, accidental biological events, and/or naturally occurring diseases." (See page 3 of the Final Office Action.) The Examiner, however, has provided no reference, or other evidence to support his conclusion that it would be obvious to one skilled in the art to modify the statistical reporting functions of O'Reilly with the early warning network of Siegel, aside from a conclusory statement. Applicant asserts that the Examiner has impermissibly concluded that claim is obvious in view of a combination of O'Reilly and Siegel without any legitimate support on the record. The Examiner has failed to provide a reference or other suitable evidence showing that one skilled in the art would be motivated to modify the teachings of O'Reilly with the teachings of Siegel In accordance with the obligations imposed under MPEP § 2144.03.

A *prima facie* case of obviousness is not established absent proper motivation. Simply because the early warning network of Siegel *could* be used in other systems, a motivation to modify O'Reilly to meet the limitations of claim 10 is not formed. Moreover, according to MPEP § 2144.01, the "fact that the claimed invention is within the capabilities of one of ordinary skill in the art is not sufficient by itself to establish *prima facie* obviousness." Merely because the claimed elements are individually found in the prior art, it does not necessarily follow that it would be obvious to combine the elements from different prior art references. *See MPEP § 2141.01, citing Ex parte Levengood*, 28 USPQ 2d 1300 (Bd. Pat. App. & Inter. 1993).

Consequently, absent a motivation to combine and modify O'Reilly with the teachings of Siegel, it is irrelevant that the elements and/or limitations *may* be individually or separately known in the prior art. Clearly, the Examiner is motivated to
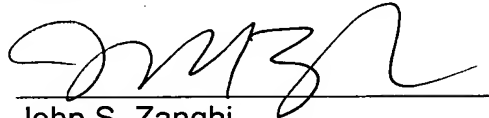
combine these teachings for no other reason than to arrive at the claimed invention. This is a classic example of impermissible hindsight.

Neither O'Reilly nor Siegel, either individually or in combination, expressly teach or fairly suggest the claimed features. Therefore, a *prima facie* case of obviousness has not been established since the alleged combination does not expressly disclose or fairly suggest all the claimed features. The rejection of independent claim 10 (and its corresponding dependent claims 11-18) should therefore be withdrawn.

VII.   CONCLUSION

For all of the reasons discussed above, it is respectfully submitted that the rejections are in error and that claims 1-18 are in condition for allowance. For all of the above reasons, Appellant respectfully requests this Honorable Board to reverse the rejections of claims 1-18.

Respectfully submitted,

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Filed: Sept. 25, 2006

CLAIMS APPENDIX

CLAIMS INVOLVED IN THE APPEAL:

1.   A method for detecting an atypical occurrence within a given region in a telecommunications network, comprising:

assigning a given weight to each of a plurality of destination addresses within said region according to said weighting system;

collecting call data for said region for a given period of time, said call data including calls made to said destination addresses and corresponding call occurrence times;

developing a weighted call traffic pattern based upon said call data; and,

using said weighted call traffic pattern to detect an atypical occurrence within said region.

2.   The method defined in claim 1 wherein said region comprises a community and said atypical occurrence is a public health crisis, said public health crisis comprising a bioterrorist attack or a health epidemic.

3.   The method defined in claim 2 wherein said destination addresses comprise telephone numbers.

4.   The method defined in claim 3 wherein said weighting system includes giving more weight to telephone numbers associated with medical-related locations, pharmacies, schools and workplaces than to other telephone numbers.

5.   The method defined in claim 1 wherein said call data comprises call detail records.

6.   The method defined in claim 5 further comprising sending the weighted destination addresses to a special database.

7.   The method defined in claim 6 further comprising adding a terminating trigger to selected destination addresses.

8.   The method defined in claim 1 further comprising adding an additional field to each of said plurality of destination addresses, said field corresponding to said weight of said destination address.

9.   The method defined in claim 1 wherein said call data comprises initial address messages.

10.   A system for detecting an atypical occurrence within a given region in a telecommunications network, comprising:

means for assigning a given weight to each of a plurality of destination addresses within said region according to said weighting system;

means for collecting call data for said region for a given period of time, said call data including calls made to said destination addresses and corresponding call occurrence times;

means for developing a weighted call traffic pattern based upon said call data; and,

means for using said weighted call traffic pattern to detect an atypical occurrence within said region.

11.   The system defined in claim 10 wherein said region comprises a community and said atypical occurrence is a public health crisis, said public health crisis comprising a bioterrorist attack or a health epidemic.

12.   The system defined in claim 11 wherein said destination addresses comprise telephone numbers.

13.   The system defined in claim 12 wherein said weighting system includes giving more weight to telephone numbers associated with medical-related locations, pharmacies, schools and workplaces than to other telephone numbers.

14.   The system defined in claim 13 wherein said call data comprises call detail records.

15.   The system defined in claim 14 further comprising means for sending the weighted destination addresses to a special database.

16.   The system defined in claim 15 further comprising means for adding a terminating trigger to selected destination addresses.

17.   The system defined in claim 10 further comprising means for adding an additional field to each of said plurality of destination addresses, said field corresponding to said weight of said destination address.

18.   The system defined in claim 10 wherein said call data comprises initial address messages.

EVIDENCE APPENDIX

NONE

RELATED PROCEEDINGS APPENDIX

NONE